

## TRANSPORTATION ELEMENT

### *PLANNING PROCESS*

Transportation planning is critical along Route 28 in Fauquier County. What appears to be a rural transportation corridor is very misleading given this road's linkages to major regional roads in the Counties of Prince William, Loudoun and Fairfax. It has other roadway interconnection points with Rt. 29/15 and Rt. 17 leading to I-66 and I-81, which has resulted in increased traffic from those avoiding I-95. With existing traffic exceeding 10,000 vehicles per day, VDOT has been planning and designing to four lane this primary road in the long-term from Prince William County to the Rt. 28 intersection with Rt. 29/15 in the Remington area.

Transportation planning now becomes more complex, because actions regarding the short and long-range roles of the Route 28 corridor through Catlett, Calverton, Midland, Bealeton and Remington. Those actions need to be coordinated and associated community impacts carefully assessed within these five service districts. Only a proactive and coordinated local planning process will protect long term agricultural production and the rural village integrity of the Catlett, Calverton and Midland communities, while meeting the peak hour efficiency and safety for traffic using the Route 28 corridor over the next 20 to 50 years.

This planning review and update process was intended to guide County actions regarding both new projects and redevelopment which occurs in Catlett, Calverton and Midland. Any conceptual service district and corridor plans should include access management along the Route 28 corridor to minimize excessive driveways. Such plans should also include inter-parcel access so that local vehicular movements can be made without using the more heavily traveled Route 28 corridor. New bikeways and bike paths as well as new local roads also need to be conceptually depicted in adopted service district plans to avoid costly and controversial conflicts in the future.

### *CATLETT, CALVERTON, MIDLAND VILLAGE SERVICE DISTRICT*

The objective of the transportation plan for these three village service districts is to protect local community values and quality of life, while at the same time allowing the Route 28 corridor to play its role in both local access and regional mobility. *This plan element focuses on the existing Route 28 right-of-way for the principal improvements needed over the next twenty-year period.*

In order to identify the magnitude and type of intersection improvements, which might emerge in the next 10 to 20 years, a detailed analysis was made of existing and projected PM peak hour conditions at seven specific Route 28 service district intersections. Those intersection locations are:

- Midland
  - Route 649 Germantown Road
- Calverton
  - Route 616 Casanova Road
  - Route 603 Bastable Road
  - Route 616 Bristersburg Road
- Catlett
  - Route 818 Old Catlett Road
  - Route 667 Old Dumfries Road and Route 806 Elk Run Road (signalized)
  - Route 796 Gaskin's Road
  - Catlett School Road (noted but not significant)

An eighth intersection, Meetze Road and Route 28, has been added to this list, including recommended improvements. Even though the specified intersection is not located in these village service districts, it needs to be included within this section since it is part of the primary roadway.

In traffic analysis studies, a jurisdiction attempts to maintain adequate levels of service (LOS) at the intersections. Those LOS categories are defined as follows:

- Level of Service A: a condition of free flow with low traffic density where no vehicle waits longer than one signal indication.
- Level of Service B: stable flow of traffic where only on a rare occasion do drivers wait through more than one signal indication.
- Level of Service C: still in the zone of stable flow, but intermittently drivers must wait through more than one signal indication and backups may develop behind left turning vehicles.
- Level of Service D: approaching instability; drivers restricted in their freedom to change lanes and delay approaching vehicles may be substantial during the peak hour.
- Level of Service E: traffic volumes are near or at capacity on the arterial and long queues of vehicles may create lengthy delays especially for left turning vehicles.
- Level of Service F: congested condition of forced traffic flow where queued backups from locations downstream restrict or prevent movement of vehicles out of the approach creating a storage area during part or all of the peak hour.

Note that level of service D or better is usually desired in urban areas and level of service C or better is usually desired in rural/small town areas, such as Fauquier County. For approaches or intersections along Route 28, which are operating at level of service D or worse, improvements were identified for two discrete time frames: 2010 and 2020.

Exhibit 1 depicts the location of the 2010 and 2020 proposed intersectional improvements, assuming that the Route 28 corridor continues to serve its regional access role beyond Fauquier County between now and 2020. More specifically, no alternative to Route 28 would be built up to 2020.

If another alternative route were constructed in the long term (post-2020), Route 28 would be expected to serve local traffic. Any alternative alignment constructed after 2020 would remove and divert a significant amount of regional through traffic from the existing Route 28 local traffic which in the longer term may warrant 4-lanes. In addition, the affect of commuter rail and other public transportation modes also must be included in any assessment, as well as corridor transportation planning and design. All three villages have indicated interest in having Virginia Railway Express (VRE) service available in the future.

It should be noted that several Route 28 alignment options were reviewed as part of this plan. The Citizen Planning Committee selected the existing Route 28 rights-of-way alignment, and preferred to have this expanded as a 4-lane divided, primary highway. However, with the financial constraints of the Virginia Department of Transportation, the plan highlights the following near-term intersectional and safety improvements:

### ***2010 IMPROVEMENTS***

Exhibits 2 and 2a identify the needed peak hour level of service related improvements at Midland and Calverton, and the following summarizes those recommended improvements:

- The Calverton intersection improvements are related to both a ten - year increase in through traffic on Route 28 and new development traffic in Calverton;
- As Route 28 corridor volumes increase, new signals may be warranted at Casanova Road in Calverton (see Exhibit 2a), at Route 649 in Midland (see Exhibit 2), and at Rt. 28/Rt. 643 (Meetze Road);
- Bike lanes need to be provided on Route 28 in accordance with any adopted countywide bike plan; and that
- Inter-parcel access is needed in Calverton to avoid traffic operational problems between the two closely spaced intersections.

### ***2020 IMPROVEMENTS***

Exhibits 3, 3a and 3b depict the 2020 improvements for Midland, Calverton and Catlett.

- In Calverton, signalization of the Casanova Road intersection may involve relocating Route 616 to avoid unnecessary conflicts with the commercial driveway and possible railroad spur activity;
- Widening Meetze Road with a left turn lane at its intersection with Route 28 will provide acceptable service; and
- Widening Route 28 through Catlett will trigger the need for more inter-parcel access if a raised and landscaped median is constructed (refer to Exhibit 3b). Besides aesthetic benefits, such a median will offer pedestrians a crossing refuge area as Route 28 corridor volumes increase. Such a raised median would also preclude traffic hazards associated with “impulse” left turns, create safer vehicular movement through Catlett, while discouraging further commercial strip development.

Since VDOT does not have sufficient funds to widen Route 28 to a complete four-lane (divided or flush median) roadway, it seems likely that intersection improvements or a group of improvements will be funded for traffic operational or safety reasons before a major highway corridor improvement is funded. This plan has identified those intersectional improvements. A five-year prioritized action plan is considered essential to insure that the maximum benefit of new roadway and other transportation improvements such as bikeways, park-and-ride lots and even rail passenger service are achieved.

#### *TRANSPORTATION IMPLEMENTATION ACTIONS 2002-2010*

The year 2002 through 2010 action plan elements are described below.

##### Year 2002

- **Priority 1**
  - a. Monitor VDOT plans/program for Route 28 corridor and local secondary roads and coordinate with Catlett, Calverton and Midland objectives.
  - b. Develop a list of traffic safety improvements/costs (based on an analysis of accident data), prioritize for implementation and coordinate with identified traffic operational improvements (based on a need to improve peak hour intersection or roadway efficiency). This task is in addition to the improvements identified herein.
  - c. Review the design and cost feasibility of the realignment of Rt. 28 between the existing right-of-way and the Southern Railroad. The objective here is to retain existing Rt. 28 and Bristersburg Road as the principal village streets. The new Rt. 28 realignment would direct the through traffic to Catlett or to Midland.

- d. Update and adopt Catlett, Calverton and Midland service district plans, which include new local streets and inter-parcel access needs.
- **Priority 2**
  - a. Monitor changing PM level of service situations at each of the eight intersections each year by making new PM counts and calculating new level of service and identify/prioritize improvements. Seek VDOT funding.
  - b. Insure that special local access needs are considered such as bike lanes, wider shoulders for farm vehicles and even park-and-ride lots or rail passenger service stations/stops.
- **Priority 3**
  - a. Make sure that all significant intersection widenings are planned to avoid costly changes if later Route 28 is upgraded to a four-lane divided roadway. Here the future right-of-way should be acquired.

#### Years 2003-2010

- a. Each year reevaluate traffic operational and safety improvement needs for VDOT implementation.
- b. Continue to monitor the PM peak hour traffic totals and update the 2010-2020 projected needs analysis to stay ahead of the operational changes as Route 28 serves higher volume traffic.
- c. Reassess planned improvements for the Route 28 corridor by systematically reviewing local and through traffic needs and adjusting the planned network periodically.

#### *50-YEAR TRANSPORTATION PLAN*

Maps 10.8 A and 10.8B identify the street network plan within Catlett and Calverton. Included are some new general alignments and connections, which need consideration as the villages develop with the timing of limited sewer services. For example, Casanova Road is proposed to have a new alignment, which intersects with Route 28 below the existing railroad tracks. That proposed alignment would offer better sight visibility for traffic turning onto Route 28, and will provide long-term access and interconnections for the neighborhoods to the east. The plans for both Catlett and Calverton would also provide existing and future residents with alternative access through and within their villages, taking advantage of existing streets and making connections without having to return to Rt. 28.

The long-term plan has many challenges, which need to be debated, reviewed and refined through time as these villages expand modestly. The principal constraints will be the acquisition of rights-of-way and construction costs for new roads when development and/or traffic warrants such improvements. Another major cost is any elevated crossing of the Southern Railroad, and there are several proposed within this plan. As such improvements warrant consideration, the Board of Supervisors will need to subject such proposals to public review through the Fauquier County Transportation Committee and the requisite public hearing process before final action or recommendations to VDOT can occur.

*[Note that the Midland Village Service District Citizen Planning Committee presented a minority report with transportation plan, which was not accepted as part of the overall plan. The Catlett, Calverton and Midland Citizen Planning Committee decision was that this sub-committee proposal needed more review beyond the timeline for this amendment to the Comprehensive Plan. That Minority report is included as Attachment 1 to the Transportation Plan.] See Map 10.8.C.*

### OBJECTIVES

- Use access management techniques – such as reverse frontage lots and parallel secondary roads, inter-parcel access and parking lot connectors – to minimize driveway and commercial entrance impact on Route 28.
- Improve traffic safety and peak hour traffic efficiency along the Route 28 corridor.
- Enhance accessibility within and through each service district by continuation of citizen participatory plans and adopt as an element of the comprehensive plan.
- Improve pedestrian, bicycle/farm vehicle safety along the Route 28 corridor and within each service district. Develop a bicycle and pedestrian path system, which links residential areas with schools and commercial/village areas.
- Evaluate the need for park-and-ride lots and commuter rail passenger service to reduce commuter traffic on Route 28 in conjunction with VRE.
- Evaluate the function and performance of the Route 28 corridor through the existing villages and determine whether secondary road improvements are needed.
- Locate future schools and community facilities convenient to Route 28 and local roads.

*POLICIES*

- Land development proposed must be coordinated with local access and Route 28 corridor access needs.
- Coordinated access planning should be achieved by dedication of necessary right-of-way for new roadway alignments or widening of existing roads identified in this plan through rezoning, subdivision and site plan applications.
- New development applicants will be expected to construct and/or provide financial contributions toward phased construction of improved roads needed for access.
- Provide a public street network level of service, which is as high as practical in each service district. There are safety, design, financial, community and quality of life issues, for example, which need to be weighed in each service district when peak hour levels of service at intersections are analyzed. However, at a minimum, Level of Service C should be maintained during peak hour traffic conditions at key intersections.
- New roads resulting from proposed land developments must meet VDOT standards for inclusion in the state highway system.